METHODOLOGY

GOALS AND STANDARDS

Goals

- Use the method that can be most scientifically maintained to yield maximum response rates.

- Increase frequency of data collection to reach a goal of continuous surveillance.
  - Within 1 to 2 years, conduct health behaviour surveillance with respondent self-report
  - Within 5 years, conduct risk factor surveillance including physical measures
  - Within 10 years, surveillance should include health examination with biochemical measures

- Work toward a common methodology but with flexibility and adjustments as needed for a country or region.

Standards

- Include all persons aged 25 to 64 in your sample. Add respondents as young as 15 and older than 64 when resources are available.

- Consider alternative methods should be considered only when small-scale methodological research has determined scientific robustness will yield usable results.

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Source: https://www.industrydocuments.ucsf.edu/docs/mrnj0001

effect. Although research on these two effects is inconclusive, more information on this can be found in a draft paper by Dillman, Phelps, Tortora, et al. entitled *Response Rate and Measurement Differences in Mixed Mode Surveys, Using Mail, Telephone, Interactive Voice Response and the Internet.* A copy of this paper can be found online at http://survey.sesrc.wsu.edu/dillman/papers /Mixed%20Mode%20ppr%20_with%20Gallup_%20POQ.pdf.

Impact of technology advancements on method of data collection

As mobile and cellular phones become more widely used, they play a role in determining how data are collected.

Computers, particularly handheld computers, should also be considered as a means of data collection as they, too, are now more widely available. Some advantages of computerized data collection include:

- Elimination of data entry and editing costs
- More accurate answers to sensitive questions
- Elimination of interviewer bias, that is, the computer asks the same questions the same way every time
- More accurate use of skip patterns

The disadvantages include:

- Potential respondents must have access to a computer or one must be provided for them.
- Researchers may have serious response rate problems in populations of lower educational and literacy levels.
- Researchers must download information from handheld computers on a daily or almost daily basis to maintain data storage space and protect the information collected.

Impact of the environment and globalization on method of data collection

The environment and globalization play an important role in the logistics associated with data collection. Some of the issues to be considered include:

- Lack of or bad roads
- Flooding and other natural disasters
- Aggression and other human conflicts

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- Data are often used for a research agenda rather than in support of public health issues.
- Obtaining additional funding to repeat a survey is difficult.

Strengths of continuous surveillance include the following:

- Allows for analysis of trend data
- Allows for emerging health issues to be integrated quickly
- Efficiently builds on start-up, training, and capacity building activities (that is, one does not have to start over every time a new survey is administered)
- Is built around public health needs rather than a specific research agenda
- Minimizes seasonal bias

Weaknesses of continuous surveillance include the following:

- Is more expensive to establish initially
- Does not provide detail around any particular health issue, although a detailed survey can be conducted within the context of a surveillance system

Data collection methods

Studies have shown that significant differences sometimes exist in the answers that people give in face-to-face interviews and telephone and mail surveys. These differences may be due to:

- Whether or not there is an interviewer
- Whether the communication is aural versus visual
- Whether the control of the question stimulus is by the interviewer or the respondent

Having an interviewer present may encourage respondents to give answers that put them in a favorable light as defined by the culture that the interviewer is assumed to represent.

When respondents are given a list to read of possible responses to a question, they are more likely to choose categories nearer the top of the list. This is called primacy effect. If the list of categories is read aloud by the interviewer, respondents are more likely to choose the last categories in the list. This is known as a recency

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Definitions of point-in-time surveys and continuous surveillance

A **point-in-time (PIT)** survey is designed to reflect current conditions at a given period of time. Typically, by the time data are analyzed and a report is written and disseminated, the results reflect health conditions in the past.

The survey may be conducted at additional points in time to allow comparisons of given conditions at specific points in time. PIT surveys are generally conducted to gather data rapidly or to provide a baseline of information on a given condition or specifically defined population. PIT surveys can lead to long-term surveillance. These surveys are especially useful for obtaining in-depth information on populations believed to be at risk for a particular health problem.

Continuous surveillance is designed to provide ongoing population-based data for developing health programmes and policies. The purpose of continuous surveillance is to reflect current and ongoing conditions.

Continuous surveillance allows for quick turn-around of results and for quick inclusion of important emerging health issues. These surveys are especially useful for obtaining relatively broad-based health risk information across a new set of critical health problem areas.

PIT surveys and Continuous Surveillance: Pros and Cons

Frequency of data collection may be an issue of importance for some countries. Frequency is determined by the methods of collection, which range from point-in-time (PIT) surveys to continuous surveillance.

Strength of PIT surveys include the following:

- Provide baseline data
- Allow in-depth study of a specific risk factor, health issue, or population
- Examine a large sample in a short survey period
- Are frequently less expensive than on-going surveillance

Weaknesses of PIT surveys encompass the following:

- A PIT survey conducted once every 5 years could require 20 years to provide trend data.
- All start-up, training and capacity-building efficiencies are lost.

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Source: https://www.industrydocuments.ucsf.edu/docs/mrnj0001

Determine survey frequency

The frequency continuum of data collection ranges from point-in-time surveys conducted once only to ongoing, monthly collection of data. If self-reported data are collected less than once every 2 years, strive to improve the frequency of data collection over time.

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METHODOLOGY

ACTION STEPS

Define the target population

Clearly define your population of interest for the sampling frame. Make sure to clearly specify who is included in the sample and who is not.

Identify all subgroups of interest to determine what sample size will be required. To aid with cross-site or cross-country comparisons, make sure to include 25 to 64 year olds in your sample.

Select the data collection method

Consider the strengths and weaknesses associated with the face-to-face interview, telephone interview, and mail methodologies.

Identify materials/equipment required to aid in data collection

After a method has been selected, there are several administrative options to consider. These include:

- Paper and pencil — requires interviewers and/or respondents to enter question responses on a paper answer sheet that will later be transferred to electronic format for computer analysis.
- Computer-assisted Interview (CAI) — requires interviewers to enter question responses directly into a laptop computer. The computer programme also can help guide the interviewer appropriately through skip patterns.
- Self-administered computer interview (PC or laptop) — requires the respondent to have some computer literacy to be able to follow on-screen instructions, use the keyboard to enter responses, and follow the computer programme to complete the survey.
- Self-administered audiotape — requires the respondent to wear a headset and listen to the questions being administered. Where privacy is an issue, such as in a small home filled with extended family members, this method helps ensure confidentiality.
- Telephone interview — requires interviewers to read the questions over the phone to the respondents and to enter the question responses on a paper answer sheet that would later be transferred to electronic format for computer analysis, or directly into a computer.

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methodological research.

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METHODOLOGY

Three primary methods for population-based surveillance exist: (1) face-to-face interviews, (2) mail self-reports, and (3) telephone interviews. For many countries, face-to-face interviews are currently the most practical approach to population-based data collection.

Methodology **Action Steps** include:

1. Define the target population
2. Select the data collection method
3. Identify materials/equipment required to aid in data collection
4. Determine survey frequency

Important Considerations in determining methodology of data collection include:

1. Definitions of point-in-time surveys and continuous surveillance
2. PIT surveys and continuous surveillance: Pros and cons
3. Data collection methods
4. Impact of technology advancements on method of data collection
5. Impact of environment and globalization on method of data collection

Methodology **Goals and Standards** include:

Goals:

1. Use the method that can be most scientifically maintained to yield maximum response rates.
2. Increase frequency of data collection to reach a goal of continuous surveillance.
3. Work toward a common methodology but with flexibility and adjustments as needed for a country or region.

Standards:

1. Include 25 to 64-year-olds in your sample, expanding ages in both directions (down to age 15 and above age 64) as possible.
2. Utilize alternative methods only when their robustness has been determined by experts in small-scale

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